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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,385	07/30/2001	Roel Den Bakker	2-1-1-6	9965

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Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
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EXAMINER	
GREY, CHRISTOPHER P	
ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,385	BAKKER ET AL.	
	Examiner	Art Unit	
	Christopher P Grey	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 7/30/01.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 July 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because

(a) The Labeling of elements in Figs 1-4 are handwritten

(b) Figs 2 and 3 are unclear to the examiner

Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

(a) Page 2 lines 12-13, and headers entering the second sub-network (from the second sub-network)

(b) Page 2 line 35- Page 3 line 1, "and the intermediate sub- the intermediate sub-network without being changed". The examiner believes it is a typographical error

(c) Page 6 line 35 (incomplete sentence), "Thus, the position of the starting point of incoming frames"

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 The examiner believes it is a typographical error (claim is incomplete) as such:

"Adding timing information to the payload when crossing the first boundary, the timing information indicating an extent to which a frame duration in the first sub-"

Claim Rejections - 35 USC § 102

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claim 9 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Cook et al. (US 2002/0103926)

Claim 9 Cook et al. (Cook 'hereinafter') discloses a node (element 20 in fig 1) generating a header (element 22 in fig 1) from payload data (element 26 in fig 1) of an incoming frame (element 18 in fig 1 and page 2 paragraph 0014)

Claim 11 Cook discloses generating a header (element 22 in fig 1) from an incoming payload (element 26 in fig 1) and header (element 28, containing synchronization data).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-8, 10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. (US 2002/0103926) in view of Holborow (US 2002/0191691).

Claim 1 Cook discloses copying a header into a payload (element 26 in fig 1) upon crossing a first boundary between a first and second network (elements 12 and 16 in fig 1, and page 2 paragraph 0015).

Cook discloses a second header (element 28 in fig 1) being added to the payload in the second network.

Cook discloses upon crossing a second boundary between the second and third networks (elements 16 and 20 in fig 1), retrieving the first header from the payload and generating header information in the third network (page 2 paragraph 0014).

Cook discloses not all bytes within the header being copied into a second frame (page 2 paragraph 0018), but does not specifically disclose a first part of a header and using a reduced size header, however Holborow discloses using a predetermined suppression algorithm to remove a field from the header of the information packet being transmitted (page 1 paragraph 007). It would have been

obvious to one of the ordinary skill in the art at the time of the invention to modify the headers generated at the networks as disclosed by Cook, with the compressed headers as disclosed by Hoborow in order to remove a field that varies in the header (abstract).

Claim 2, 6 Cook discloses a plurality of nodes in each network (elements 13 or 17 or 21), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that these plurality of nodes are multiplexed into a frame (element 14 in fig 1).

Cook discloses not all bytes within the header being copied into a second frame (page 2 paragraph 0018) and an unused portion of the payload (page 2 paragraph 0019), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the less information copied to the second frame is the more unoccupied space available.

Cook discloses a header being placed in a payload (element 26 in fig 1), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that in order for the header to be placed in the payload there must be enough unoccupied space.

Cook does not disclose the common frame carrying an integer multiple of information per frame and the header of the common frame being maintained at a prescribed size. Hoborow discloses a first terminal transmitting compressed constant length information packets with suppressed payload headers (page 1 paragraph 0013), where it would have been obvious to one of the ordinary skill in

the art at the time of the invention that the suppressed headers were of a prescribed size.

Claim 3, 7, 15 Cook does not disclose the second part of the headers that is not copied to the payload including synchronization information, however Hoborow discloses removing a field that varies in the header (page 1 paragraph 0007) according to a predetermined suppression algorithm. Furthermore the background of the invention discloses that synchronization data varies (page 1 lines 10-29).

Claim 4 Cook does not disclose adding timing information to the payload and using this timing information to regenerate frame in the second sub-network upon crossing the second boundary, so that frames in the second sub-network have substantially the same duration as corresponding frames in the first sub-network.

Holborow discloses a timestamp field (page 2 paragraph 0021), where it would have been obvious and well known to one of the ordinary skill in the art at the time of the invention to use this timing information to synchronize different network nodes frame transmission.

Claim 5 Cook discloses a node (element13 in fig 1) for copying a header into a payload of an outgoing frame (element 26 in fig 1 and page 2 paragraph 0014).

Cook discloses not all bytes within the header being copied into a second frame (page 2 paragraph 0018) and an unused portion of the payload (page 2 paragraph 0019), where it would have been obvious to one of the ordinary skill in

the art at the time of the invention that the less information copied to the second frame is the more unoccupied space available.

Cook discloses another node (element 17 in fig 1) for generating a second header (element 28 in fig 1) for an outgoing frame (element 18 in fig 1).

Cook does not specifically disclose a first part of a header and using a reduced size header, however Holborow discloses using a predetermined suppression algorithm to remove a field from the header of the information packet being transmitted (page 1 paragraph 007). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the headers generated at the networks as disclosed by Cook, with the compressed headers as disclosed by Hoborow in order to remove a field that varies in the header (abstract).

Claim 8 Cook does not disclose adding timing information to the payload of the outgoing frame, the timing information indicating an extent to which an incoming frame duration differs from an outgoing frame duration.

Holborow discloses a timestamp field (page 2 paragraph 0021), where it would have been obvious and well known to one of the ordinary skill in the art at the time of the invention to use this timing information to indicate duration of time for outgoing or incoming frames.

Claim 10 Cook discloses a plurality of nodes connected within a network (elements 21 in fig 1), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the receiving node demulitplexes

the incoming frame in order to distribute information to the plurality of nodes within the network.

Cook does not disclose the common frame carrying an integer multiple of the information carried per outgoing frame, however Hoborow discloses a first terminal transmitting compressed constant length information packets (integer multiple of information carried per outgoing frame) (page 1 paragraph 0013), where it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the frames being transmitted as disclosed by Cook, with the constant length as disclosed by Hoborow in order to decrease transmission errors.

Claim 12 Cook does not disclose timing information from the payload data being used to adjust a frame duration of the outgoing frames to reconstitute a frame duration of an original frame encoded in an incoming frame.

Holborow discloses a timestamp field (page 2 paragraph 0021), where it would have been obvious and well known to one of the ordinary skill in the art at the time of the invention to use this timing information to synchronize different network nodes frame transmission. The motivation to modify the frame transmission as disclosed by Cook with the time stamping as disclosed by Holborow is to achieve synchronization.

Claim 13 Cook discloses a node (element 13 in fig 1) for copying a header into the payload of a frame (element 26 in fig 1) for transmission across a first boundary (between elements 12 and 16 in fig 1 and page 2 paragraph 0014)).

Cook discloses not all bytes within the header being copied into a second frame (page 2 paragraph 0018) and an unused portion of the payload (page 2 paragraph 0019), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the less information copied to the second frame is the more unoccupied space available.

Cook discloses a second header (element 28 in fig 1) that is added to the frame (element 18 in fig 1).

Cook discloses a node (element 21 in fig 1) for retrieving the original header (element 22 in fig 1 and page 2 paragraph 0014)

Cook does not specifically disclose a first part of a header, using a reduced size header having a prescribed size, however Holborow discloses using a predetermined suppression algorithm to remove a field from the header of the information packet being transmitted (page 1 paragraph 007). Hoborow discloses a first terminal transmitting compressed constant length information packets with suppressed payload headers (page 1 paragraph 0013), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the suppressed headers were of a prescribed size.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the headers generated at the networks as disclosed by Cook, with the compressed headers as disclosed by Hoborow in order to remove a field that varies in the header (abstract).

Claim 14 Cook discloses a plurality of nodes in each network (elements 13 or 17 or 21), where it would have been obvious to one of the ordinary skill in the art

at the time of the invention that these plurality of nodes are multiplexed into a frame (element 14 in fig 1).

Cook discloses not all bytes within the header being copied into a second frame (page 2 paragraph 0018) and an unused portion of the payload (page 2 paragraph 0019), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the less information copied to the second frame is the more unoccupied space available.

Cook discloses a header being placed in a payload (element 26 in fig 1), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that in order for the header to be placed in the payload there must be enough unoccupied space.

Cook does not disclose the common frame carrying an integer multiple of information per frame and the header of the common frame being maintained at a prescribed size. Hoborow discloses a first terminal transmitting compressed constant length information packets with suppressed payload headers (page 1 paragraph 0013), where it would have been obvious to one of the ordinary skill in the art at the time of the invention that the suppressed headers were of a prescribed size.

Cook fails to teach an interleaver for multiplexing. Official Notice is taken that both the concept and advantages of providing an interleaver for multiplexing are well known and expected in the art. It would have been obvious to have included the interleaver in the nodes disclosed by Cook, as the interleaver is known to multiplex a plurality of frames from other nodes or transmitters.

Allowable Subject Matter

6. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 16 discloses rate adapters for inserting timing information and adapting the rate in sub-networks to allow the same duration in both first and second sub-networks.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Kjriwal et al. (US 6704794) discloses a cell processing system configured to parse packet header information located within the payload.

(b) Leung et al. (US 2002/0142757) discloses header compression in a wireless communication system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Grey whose telephone number is (571)272-3160. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey
Examiner
Art Unit 2667

C Grey
3/7/05

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 3/7/05